

Abstract

A sensor utilizing a non-leachable or diffusible redox mediator is described. The sensor includes a sample chamber to hold a sample in electrolytic contact with a working electrode, and in at least some instances, the sensor also contains
5 a non-leachable or a diffusible second electron transfer agent. The sensor and/or the methods used produce a sensor signal in response to the analyte that can be distinguished from a background signal caused by the mediator. The invention can be used to determine the concentration of a biomolecule, such as glucose or lactate, in a biological fluid, such as blood or serum, using techniques such as coulometry,
10 amperometry, and potentiometry. An enzyme capable of catalyzing the electrooxidation or electroreduction of the biomolecule is typically provided as a second electron transfer agent.